TITLE: PROCESS & INSTRUMENTATION DIAGRAM FOR 15MLD ISPS AT HSR LAYOUT IAS OFFICER COLONY

DWG NO TCE.13370A-ME-3008-PID-30002

SCADA SIGNALS TO MIS2

PLC/HMI SIGNALS

ELECTRIC HOIST — 3 TON QTY.-1

ELECTRIC HOIST — 2 TON (MANUAL SCREEN LIFTING) QTY.-1

PORTABLE ACTUATOR QTY.-2

SCREENING CONTAINERS QTY.-2

EXISTING INLET MANHOLE — 900ø RCC NP3

WEIR GATE 1000 X 750

900ø RCC NP3 — TO NALA

COARSE SCREEN

1000 X 1000

1000X1000

WET WELL

LEVEL HIGH ALARM AT DOWNSTREAM STP

STEP CONTROL

H,HH LS LIT L,LL

LSHH LSH

LIT LE

WS

100ø DI-K9 NRV DJ KGV — DP-1

400ø DI-K9 NRV DJ KGV — P-1

400ø DI-K9 NRV DJ KGV — P-2

1000 X 1000

400ø DI-K9 NRV DJ KGV — P-3

400ø DI-K9 NRV DJ KGV — P-4

100ø DI-K9 NRV DJ KGV — DP-2

600ø DI-K9

AV 150ØNB

PS

FIT

SV 150NB

600ø DI-K9 DJ NRV

TO AGRAM STP

PA HH

PI FIQ

PIT PE

SI. NO.	MECHANICAL EQUIPMENT	EQUIPMENT DETAILS	QUANTITY
1	DEWATERING PUMP	20cum/hr @ 18mwc	1+1
2	SEWAGE TRANSFER PUMP	938cum/hr @ 20mwc	4(2W+2S)
3	MECHANICAL COARSE SCREEN (50mm OPENING)	1.4mW X 0.70mSWD	1+1
4	J-TYPE MANUAL COARSE SCREEN (100mm OPENING)	1.4mW X 0.70mSWD	1+1
5	SCREENING CONTAINER	Capacity 2cum	2
6	BELT CONVEYER	0.6mW x 6mL	1
7	PORTABLE ACTUATOR	–	2
8	WEIR GATE	1000mm X 750mm	1
9	SLUICE GATE	1000mm X 1000mm	7
10	DOMESTIC WATER PUMP SET	1000mm X 1000mm	2
11	EMERGENCY DWATERING PUMP	50m^3/hr/15mwc	2 (1W+1S)

SI. NO.	NAME OF UNIT	SIZE	QUANTITY
1	OVER FLOW CHAMBER	2.0mL X 2.5mW X 3.0m Ht.	1
2	COARSE SCREEN INLET CHANNEL	2.5mL X 2.5mW X 0.70mSWD	1
3	COARSE SCREEN CHANNEL	8.4mL X 1.4mW X 0.70mSWD	2
4	COARSE SCREEN EFFLUENT CHANNEL	2.0mL X 3.2mW X 0.70mSWD	1
5	WET WELL CIRCULAR (TWO COMPARTMENT)	10m (DIA) + 2.0M (LD)	1

NOTE :

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS.
2. AVERAGE FLOW PUMPS WILL BE WORKING ON VARIABLE FREQUENCY DRIVE (VFD).

LEGENDS :

HMI – HUMAN MACHINE INTERFACE
PLC – PROGRAMMABLE LOGIC CONTROLLER
NRV – NON RETURN VALVE
FIT – FLOW INDICATING TRANSMITTER
PG – PRESSURE GAUGE
LIT – LEVEL INDICATING TRANSMITTER
LS – LEVEL SWITCH
PS – PRESSURE SWITCH
PIT – PRESSURE INDICATING TRANSMITTER
DI – DUCTILE IRON
P – SUBMERSIBLE PUMP
DP – DEWATERING PUMP
SV – SCOUR VALVE
KGV – KNIFE GATE VALVE
MKGV – MOTORISED KNIFE GATE VALVE
AV – AIR VALVE
GV – GATE VALVE
DJ – DISMANTLING JOINT
LDT – LEVEL DIFFERENTIAL TRANSMITTER
MSG – MOTORISED SLUICE GATE
MWG – MOTORISED WEIR GATE
VFD – VARIABLE FREQUENCY DRIVE
LAL – LEVEL ALARM LOW
LALL – LEVEL ALARM LOW LOW
LAH – LEVEL ALARM HIGH
LAHH – LEVEL ALARM HIGH HIGH
ES – EMERGENCY STOP
A/O/M – AUTO /OFF/ MANUAL
L/O/R – LOCAL/OFF/REMOTE
FIQ – FLOW INTIGRATOR TOTALIZER
S/S – START/STOP
SC – SPEED CONTROL
SI – SPEED INDICATOR
C/S/O – CLOSE/START/OPEN
cum – CUBIC METER
PAHH – PRESSURE ALARM HIGH HIGH
NTS – NOT TO SCALE

ENGINEERING REFERENCE DRAWINGS :

–NIL–

ENGINEERING REFERENCE DRAWINGS :

–NIL–

	SIGN.												
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	INITIALS	MGS	AM	AM							RH	RH	06-02-2024
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE
					CLEARED								

DO NOT SCALE

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PROCESS & INSTRUMENTATION DIAGRAM FOR 15MLD ISPS AT HSR LAYOUT IAS OFFICER COLONY

TATA CONSULTING ENGINEERS LIMITED
MUMBAI

SCALE : NTS
DC & DISC : DM_CV
FILE NAME :
DWG NO. TCE.13370A-ME-3008-PID-30002
ISSUE P0
SIZE-A1

FILE NAME: F-091-Rev-R1.dwg

TCE FORM NO. 091 P0